

REMARKS

The claims, as amended herein, are considered improvements over Applicant's US Patent 6,267,107 ('107) which was cited as a main prior art reference in the action.

Independent claims 1 and 20 were amended to omit limitations best stated in dependent claims and otherwise establish proper scope. Claim 9 was rewritten as an independent claims and modified. Dependency of claims 2-5 was amended.

New claims 21-23 were added. Support for all amendments and new claims appear in the specification, drawings and/or original claims.

Claims 1 and 4-20 were rejected as anticipated by the present inventor's own prior patent (USP 6,267,107; i.e. '107) the above action stating, *inter alia* at the top of its p. 3 and in discussion of claim 5 that the two spark plugs are selectively fired [singly or together] to deal with light and high loads. Applicant respectfully traverses this ground of rejection. Ward '107 does not disclose the selective firing for high and low loads - not at col. 2, ll. 32-42; not at col. 3, ll. 20-29; not at col. 6, ll. 8-32 or 49-65; not at col. 9, l. 2 or col. 9, ll.28-36; nor any other text locations concerning spark firing; nor are the drawings (FIGS. 2a and 10a only illustrating different effects but not teaching selective firing of the plugs - see, e.g., col. 6, ll. 8-14 - different showings for "ease of visualization"; "spark discharges around both spark gaps"),

With respect to the further assertion of the action that claims 2 and 3 are unpatentable, under 35 U.S.C. §103, over Ward '107 in view of Regeiro (US 5,320,075), the action cites Regeiro as having two spark plugs located at or near high squish regions. This is incorrect. Review of the Regeiro patent, particularly the drawings, shows no squish regions at the spark plug sites. For squish to be generated, a squish land has to exist at the spark plug site, as indicated in the drawing of Appendix A hereto. When the piston is between 20° and 0° (top center, TC), the piston is almost touching the squish lands and the air adjacent to the squish lands is forced radially inwards into the center of the combustion chamber. The relevant figures of the Regeiro patent, namely FIGS. 2, 3, 4, 6, 8, 9, 11, show the plugs in two locations, one at the combustion chamber periphery between the two intake valves where no squish can exist (no squish land), and the other at approximately the center of the combustion chamber where no squish can exist (but

tumble exists). Therefore, the reference to Regeiro should not be applied as relevant to the current patent application. As for Ward '107, a prior patent of the present Applicant, it did not disclose the presently claimed subject matter and there is no suggestion therein to modify it in accordance with the present invention.

It is submitted the above amendments overcome the objections raised in the action, that the present claims 1-23 meet all requirements of 35 U.S.C. §§ 100-103 and 112 and it is respectfully requested the application be passed on for allowance.

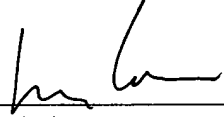
If questions remain, please call Applicant's attorney, collect, at the number given above. Please charge any fees associated with claims adjustments to Deposit Account 03-2410, order no. 6050. A duplicate copy of this page is enclosed for Accounting Branch purposes.

Respectfully submitted,

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Dated: April 20, 2006

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Enclosure: Appendix A



APPENDIX A

